

7.1 INTRODUCTION

The Delta is the subject of numerous strategic and physical planning efforts, currently managed through the CALFED Bay-Delta program. As the hub to over 40 percent of the state's precious freshwater resources, the geographic area is inextricably connected with the politics of water, and all of the critical uses and attributes associated with water. The Delta is the focal point for agricultural and urban water uses, for statewide water distribution strategies, for water-related environmental issues, and for flood control. Within the CALFED program and planning process, boating recreation is yet another important consideration of the many competing and interwoven interests.

7.2 CALFED BACKGROUND

CALFED is a federal/state-coordinated program composed of 23 federal and state agencies that have regulatory or management responsibility for some aspect of the Delta. The mission of the CALFED Bay-Delta program is to develop and implement a long-term comprehensive plan that will restore ecological health and improve water management for the beneficial uses of the Bay-Delta system.

The CALFED Bay-Delta program was formed in 1994 with the signing of a Framework Agreement outlining the cooperation between state and federal agencies who, on the basis of that agreement, should work together in Delta management to find long-term solutions to problems. The CALFED Bay-Delta agencies, with input from the Bay-Delta Advisory Council (BDAC), outlined a three-phase process to achieve agreement on long-term solutions.

First, the problems were identified. The CALFED Bay-Delta agencies defined four basic problem areas within the Delta system:

- Ecosystem quality
- Water supply reliability
- Water quality
- Levee system integrity

The CALFED Bay-Delta program focuses on the interrelationships between the problems, and

searches for solutions that address multiple problems.

The second phase involved the formulation of a program-level Environmental Impact Statement/Environmental Impact Report (EIS/EIR). This documentation was prepared to articulate the range of issues and problems associated with the Delta and then to identify solutions and preferred alternatives to the problems and issues outlined. The EIS/EIR was finalized and approved in July 2000.

The third phase involves the implementation of specific projects. This phase is estimated to take over 30 years to fully implement. This phase also requires an understanding of commitment by all the various agencies involved. The CALFED Bay-Delta agencies signed a Memorandum of Understanding (MOU) in August 2000 that outlines the implementation of the CALFED Bay-Delta plan. Under this plan, each agency maintains its own authority and responsibilities, with each agency having assigned staff to work on the program. A program manager oversees each element, while an appointed director provides general oversight. The program is administered around ten primary program elements:

- Ecosystem restoration
- Watersheds
- Water management
- Storage
- Conveyance
- Water use efficiency
- Drinking water quality
- Water transfers
- Levee system integrity
- Science

The following is a summary of the CALFED Bay-Delta program accomplishments up to the year 2002, as highlighted in the 2001 Annual CALFED Bay-Delta Report:

- \$18 million were invested to improve levees on approximately 50 Delta islands for the purpose of improving water quality,

improving flood protection, and enhancing habitat conditions.

- Seventy ecosystem restoration projects were funded, including in-channel island restoration, fish screens, and riparian habitat restoration.
- Seven watershed projects were funded, including projects providing flood protection, creek restoration, strategies, and stewardship.
- A fish test facility at Tracy has been planned, which, when completed, will provide data on the effectiveness of screening facilities in the South Delta.
- Work was continued on the South Delta Improvement Program, including installation of a permanent fish screen and flow control structures, and modification of the Clifton Forebay to increase pumping flow capacities.
- Environmental documentation for the North Delta Flood Protection improvements was initiated.
- Methods to address drainage problems throughout the Delta were investigated.
- Strategies for the Delta Dredge/Reuse Program were further considered.
- Ways to slow, stop, or reverse Delta land subsidence were investigated.
- An Environmental Water Account for managing water operations in order to improve the reliability of water and protect targeted aquatic species was implemented and reviewed.

Additionally, the following studies were initiated:

- A feasibility study of the through-Delta diversion facility to the Sacramento River.
- A study of alternatives for in-Delta water storage.
- An operations study aimed at fishery and water quality impacts.
- A study of dissolved oxygen levels in the Stockton deep-water channel.
- A study of the sources and concentrations of contaminants in the Bay-Delta system.

- An evaluation of the factors influencing outcomes and impediments in restoring breached Delta islands.
- A study of Delta mercury distribution and contamination patterns.

Year 2000 funding consisted of \$5,916,272 applied to 19 different projects.

7.3 CALFED BAY-DELTA PREFERRED ALTERNATIVE – RECORD OF DECISION

The *Record of Decision* provides a road map for the CALFED agencies and includes the specific actions planned for the implementation phase of the CALFED program. The following are the proposed actions identified in the *Record of Decision* (ROD):

1. The flooding of Holland and Bouldin Islands for in-Delta water storage and aquatic habitat.
2. The potential screened diversion and conveyance channel at community of Hood.
3. Revamping the Delta Cross Channel operation and diversion facility on the Sacramento River.
4. Georgiana Slough restoration.
5. North and South forks of the Mokelumne River setback levees or channel modifications.
6. Habitat restoration and flood control on the McCormack-Williamson Tract.
7. Old River channel enlargement.
8. South Delta channel dredging, screening, and consolidation of agricultural intakes.
9. South Delta levee setbacks and improvements.
10. South Delta operable flow control barriers.
11. Clifton Court Forebay pumping station and fish screen.
12. Proposed Delta-wide Ecosystem Restoration Program (ERP).

7.4 CALFED ACTIONS AND RECREATION

The CALFED Bay-Delta program, with its associated projects and actions is anticipated to have a significant influence on the quality and extent of water-based recreation in the future. Although recreation is a significant function of the Delta, according to the programmatic EIS/EIR, recreation is an identified Delta resource rather than a problem or program element. Because it is an identified resource, the specific actions or projects resulting from the CALFED program must therefore consider the implications or impacts upon recreation. The mitigation measures adopted in the *Record of Decision* (ROD) state that the implementation of the Preferred Program Alternative may have significant effects on recreation. These significant effects could include:

- Temporary closure of recreation areas during construction
- Decreases in recreation opportunities
- Increases in boating traffic in some areas due to speed restrictions or prohibition of motorized boating
- More stringent enforcement of boating discharge standards
- Temporary or permanent changes in boating access and navigation
- Permanent closure of recreation facilities
- Potential decrease in flooded lands suitable for wildlife, hunting, or fishing
- Reduced water-contact recreation
- Potential for reduced access to recreation facilities
- Potential short-term construction effects of dredging, such as obstructions, closing, channels, noise, or visual disturbances

Potential impacts to recreation as a result of planned CALFED Bay-Delta actions are illustrated in **Figure 7-1** and **Figure 7-2**. According to the ROD, the 12 outlined actions should be undertaken in an integrated manner rather than as incremental, stand-alone projects.

It is this study's viewpoint that with the multiple recreational-related issues outlined above, there are also potential opportunities for increased recreation that can be associated with the CALFED Bay-Delta Preferred Alternative actions. Benefits may include improved water quality; increased fishing, hunting, and wildlife viewing opportunities; increased flood protection for boat launches; and increased or improved access to public recreation and wildlife areas.

As a programmatic EIR/EIS level of analysis, there are only general characterizations of the 12 proposed CALFED actions. Among the 12 actions, the Ecosystem Restoration Program (ERP) has potentially the broadest implications with respect to recreation activities in the Delta and is also the most schematically described. In **Figure 7-2** the physical extent of the Delta-wide ERP is illustrated.

It was the intent of this study to gather information regarding the specific recreation preferences and use patterns within the Delta as a basis for evaluating the relative degree of impacts associated with the CALFED actions. Although geographic recreation user information was compiled and recorded from both the workshop outreach and the statewide surveys, the information obtained was qualitative, not quantitative. Therefore, the combination of general programmatic level descriptions of the CALFED actions, along with limitations of the gathered information pertaining to recreation activities in the Delta, resulted in an analysis that is limited to identifying the broader relationships between potential CALFED action-related impacts affecting the various types of water-related Delta recreation. **Table 7-1** outlines potential impacts and opportunities associated with these proposed CALFED Bay-Delta actions.

**Table 7-1
CALFED Actions and Potential Recreation Impacts and Benefits**

Proposed CALFED Actions	Potential Impacts to Recreation	Potential Recreation Benefits
<p><i>1. The Flooding of Holland and Bouldin Islands for Habitat Enhancement and In-Delta Storage</i></p> <p>A proposal to flood Holland and Bouldin for water storage. The Islands would become aquatic habitat areas and potentially subject to Habitat Management Plans.</p>	<ul style="list-style-type: none"> • Possible loss of private hunting areas and boat dock locations. • Significant impact to Highway 12 and associated recreation facilities due to the inundation of Bouldin Island. 	<ul style="list-style-type: none"> • Improved aquatic habitat may enhance fishing opportunities. • The flooding of the islands may provide more water surface area for boating opportunities. However, it is still undetermined whether the recreational use of the newly created waters will be allowed.
<p><i>2. Hood Potential Screened Diversion and Conveyance Channel</i></p> <p>A water diversion structure with the purpose of intercepting Sacramento River water and then conveying it southward towards McCormack Track.</p>	<ul style="list-style-type: none"> • Existing recreation activities in Snodgrass Slough, such as boat camping and fishing, that are related to the mature riparian forest setting may be adversely affected by this conveyance structure. • Depending upon the shallow channel route selected, existing recreation facilities could be adversely affected. 	<ul style="list-style-type: none"> • None identified.
<p><i>3. Delta Cross Channel Re-operation and Diversion Facility on the Sacramento River.</i></p> <p>A water diversion strategy with a capacity of up to 400 c.f.s. for the transfer of "up-stream" water to "downstream" consumers.</p>	<ul style="list-style-type: none"> • Since the Cross Channel is an important transit route for recreation boaters, there are potential impacts related to the operations of the gate in terms of length of time or time of year that it is open for boat traffic. 	<ul style="list-style-type: none"> • None identified.
<p><i>4. Georgiana Slough Restoration</i></p> <p>A restoration proposal for tidal and riparian habitat along seven miles of the Georgiana Slough.</p>	<ul style="list-style-type: none"> • Habitat restoration management goals could potentially restrict boating activity in the Georgiana Slough with no-wake speed zones and seasonal boating closures. 	<ul style="list-style-type: none"> • Improved fishing opportunities as a result of enhanced aquatic habitat. • Improved wildlife viewing and nature study opportunities.
<p><i>5. North and South Forks of the Mokelumne River Possible Setback Levees or Channel Modifications</i></p> <p>Possible setback levees or channel modifications are planned for both the North and South Forks of the Mokelumne River. Riparian habitat corridors would be associated with the setback levees.</p>	<ul style="list-style-type: none"> • Levee setbacks could displace several existing marinas. • Boating circulation patterns could be disrupted if both the North and South Forks of the Mokelumne River were subject to wake-less or reduced speedboat operation. 	<ul style="list-style-type: none"> • Improved habitat will provide recreation opportunities for nature related pursuits such as non-motorized boating, wildlife viewing and fishing. • Potential for the development of additional day-use fishing and picnicking access points in association with the development of setback levees. • Opportunities to develop boat day-use and overnight mooring areas (like Delta Meadows) in conjunction with the development of setback levees and habitat restoration areas.

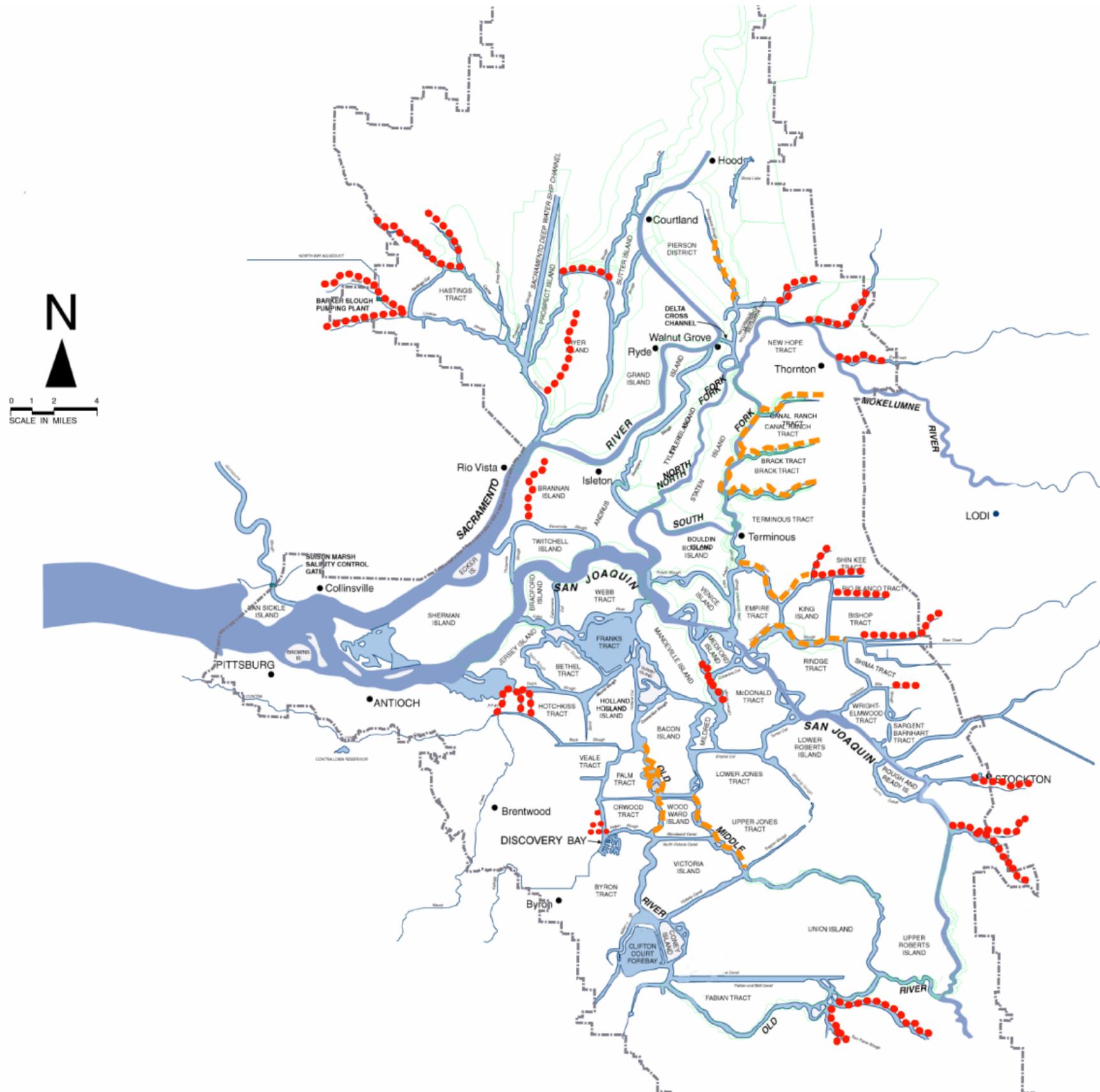
Proposed CALFED Actions	Potential Impacts to Recreation	Potential Recreation Benefits
<p><i>6. Habitat Restoration and Flood Control on McCormack-Williamson Tract</i></p> <p>The CALFED goal for McCormack-Williamson Tract is to enhance shallow water, wetland, and riparian habitats and to use the island as a flood bypass to provide an increased level of flood protection for the region. The Nature Conservancy owns this property.</p>	<ul style="list-style-type: none"> • None foreseen at conceptual stage of project. 	<ul style="list-style-type: none"> • Habitat improvements may result in opportunities for nature interpretation and wildlife viewing programs for the general public.
<p><i>7. Old River Channel Enlargement</i></p> <p>Old River channel enlargement involves channel modification of a 4.9-mile reach of Old River from Clifton Court Forebay to Indian Slough.</p>	<ul style="list-style-type: none"> • None foreseen at conceptual stage of project. 	<ul style="list-style-type: none"> • Recreation benefits may result with the modified setback levee design. Riparian habitat features, improved visual character, and public access features can be incorporated into the design.
<p><i>8. South Delta Channel Dredging, Extensive Screening and Protection of Agricultural Intakes</i></p> <p>This action is intended to protect navigation and local water diverters in the South Zone that are not adequately protected by the Temporary Barriers Program.</p>	<ul style="list-style-type: none"> • None foreseen at conceptual stage of project. 	<ul style="list-style-type: none"> • Dredging of shallow channels will improve boating opportunities in the south Delta. • Dredging at public marinas and yacht clubs in the project area will improve the viability of these business operations and their ability to provide service to the public.
<p><i>9. South Delta Levee Setbacks and Improvements</i></p> <p>Levee setbacks and improvements are proposed in the south Delta west of Clifton Court Forebay in the areas of Middle River, Grant Line Canal, and Old River.</p>	<ul style="list-style-type: none"> • Levee setbacks could possibly displace existing recreation facilities. • Because these improvements may be accompanied with water and riverine habitat improvements, boating speed restrictions and associated boating circulation patterns could be disrupted in the channels where set-back levees are created. 	<ul style="list-style-type: none"> • Improved habitat will provide recreation opportunities for nature related pursuits such as non-motorized boating, wildlife viewing, and fishing. • Potential for the development of additional day-use fishing and picnicking access points in association with the development of setback levees. • Potential for development of boat and day-use areas in conjunction with the development of setback levees. • Possible opportunities to increase natural destination sites like Delta Meadows that could include boat overnight mooring areas in conjunction with the development of setback levies and habitat restoration areas.

Proposed CALFED Actions	Potential Impacts to Recreation	Potential Recreation Benefits
<p><i>10. South Delta Operable Flow Control Barriers</i></p> <p>Flow control barriers are planned for Old River below Clifton Court Forebay and Middle River near the Grant Line Canal. Tests with temporary barriers (i.e., head of Old River site) are proposed prior to building permanent rock structures. With either temporary or permanent barriers, recreation impacts are assumed to be the same.</p>	<ul style="list-style-type: none"> • Flow control barriers will impede boat circulation in the area and force boaters to relocate to other areas of the Delta. • Disruption to boat circulation patterns will impact marina operations in the areas where flow control barriers are located. 	<ul style="list-style-type: none"> • Benefits may result if development of recreation facilities occurs in conjunction with flow control barriers, i.e., day-use facilities such as fishing piers, shaded picnic areas, auto and boat-trailer parking, and restrooms. • There are potential recreation benefits if barrier sites can be linked with multi-purpose trails to other existing and proposed land and water-based recreational facilities.
<p><i>11. Clifton Court Forebay Pumping Station and Fish Screen</i></p> <p>A fish screen and pumping station are proposed at the Clifton Court Forebay in the area of the Old River drainage into the Forebay.</p>	<ul style="list-style-type: none"> • Possible loss of sport fish from operation of new facility. 	<ul style="list-style-type: none"> • Improved fishery as a result of modified fish screen.
<p><i>12. Proposed Delta-wide Ecosystem Restoration Program</i></p> <p>The Ecosystem Restoration Program (ERP) will be implemented throughout the Bay-Delta's watershed, consistent with the Strategic Plan for Ecosystem Restoration.</p>	<ul style="list-style-type: none"> • Ecosystem restoration actions may result in non-motorized boat zones in some areas of the Delta currently used for boating recreation. • Recreational boating may be impeded as a result of the establishment of no-wake zones in areas of the Delta currently used for active boating. • The program may result in the seasonal closures of sloughs and/or water channels in lieu of year-round closures with respect to motorized boating use. 	<ul style="list-style-type: none"> • The conversion to non-motorized boating zones in selected sloughs can potentially provide more opportunities for canoeing, kayaking, and other non-motorized boating in otherwise sensitive habitat Delta areas. • Opportunities for wildlife observation and nature study will be enhanced by ecosystem restoration actions. • Fishing opportunities could be enhanced by improvements to aquatic habitat areas in the Delta.

7.5 CALFED SUMMARY

The array of CALFED-related actions and suggested implications to boating in terms of potential impacts and opportunities are outlined above. Evident in this analysis is the potential for both improvement and adverse affects upon recreation with respect to the specific outlined actions. Underlying the concept of improved recreational boating in the Delta as a result of these actions is the predominant opinion as expressed through the surveys and workshops - that the quality of the resource, and in particular, the quality of the water - was the most important variable affecting the boating experience. Also evident is a potential shift in the types of

recreation opportunities if these actions are fully implemented. For example, the total amount of waterways usable by powerboats may result in a net decrease, while the total amount of waterways that will be accessible by non-motorized craft, such as canoes and kayaks, may result in a net increase. Specific recreation impact studies are recommended for each of the proposed CALFED actions in order to accurately quantify both the short- and long-term impacts with respect to recreation.



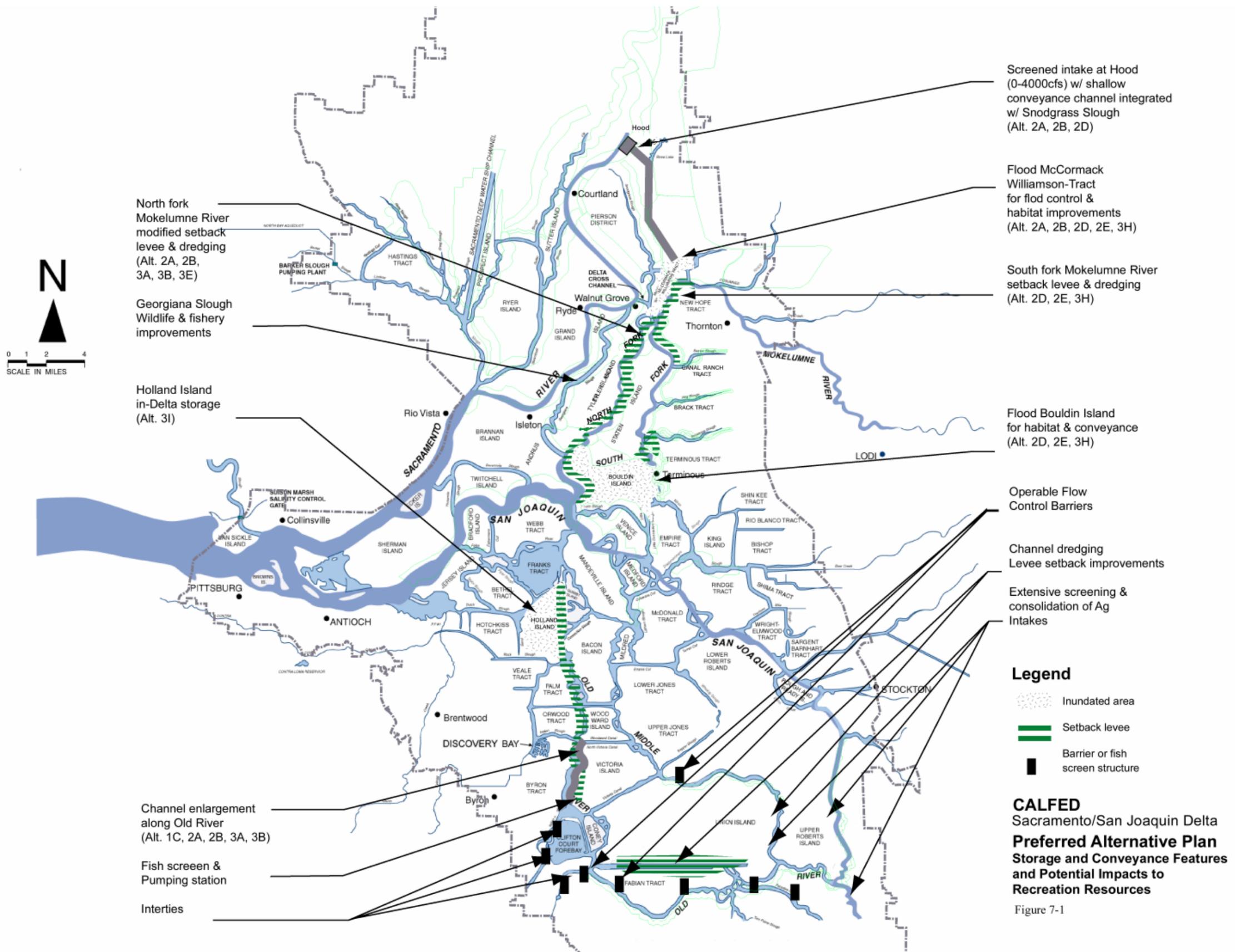
Legend

- No motorized zone
- - - - - No wake zone

Sacramento/San Joaquin Delta
**CALFED Preferred Alternative
 Ecological Restoration Plan**

Potential Boating Impacts

Figure 7-2



Screened intake at Hood (0-4000cfs) w/ shallow conveyance channel integrated w/ Snodgrass Slough (Alt. 2A, 2B, 2D)

Flood McCormack Williamson-Tract for flood control & habitat improvements (Alt. 2A, 2B, 2D, 2E, 3H)

South fork Mokelumne River setback levee & dredging (Alt. 2D, 2E, 3H)

Flood Bouldin Island for habitat & conveyance (Alt. 2D, 2E, 3H)

Operable Flow Control Barriers

Channel dredging Levee setback improvements

Extensive screening & consolidation of Ag Intakes

- Legend**
- Inundated area
 - Setback levee
 - Barrier or fish screen structure

CALFED
 Sacramento/San Joaquin Delta
Preferred Alternative Plan
 Storage and Conveyance Features and Potential Impacts to Recreation Resources

Figure 7-1

North fork Mokelumne River modified setback levee & dredging (Alt. 2A, 2B, 3A, 3B, 3E)

Georgiana Slough Wildlife & fishery improvements

Holland Island in-Delta storage (Alt. 3I)

Channel enlargement along Old River (Alt. 1C, 2A, 2B, 3A, 3B)

Fish screen & Pumping station

Interties

